

WHAT IS CLAIMED:

*Sub A1* 1. A golf ball comprising:  
*D1* a dual core having a center component and a core layer disposed about said center component; and, a cover layer disposed about said dual core;

5 wherein said center component comprises a thermoset material and said core layer comprises a thermoplastic material;

wherein said cover layer includes at least a single outer cover layer having a Shore D hardness of  
10 from about 40 to 60.

2. The golf ball of claim 1 wherein said thermoset material comprises a material selected from the group consisting of (i) a diene-containing polymer, (ii) a metallocene catalyzed polyolefin that is crosslinked, (iii) a polyurethane, (iv) a silicone, (v) a polyamide, (vi) a polyurea, and (vii) combinations thereof; and said thermoplastic material comprises a material selected from the group consisting of (i) an ionomer, (ii) a polyurethane, (iii) an elastomer, (iv) a polyetheramide, (v) a polyetherester, (vi) a metallocene catalyzed polyolefin, (vii) a styrene butadiene block copolymer, and (viii) combinations thereof.

3. The golf ball of claim 1 wherein said core layer comprises more than one layer.

4. The golf ball of claim 1 wherein said thermoset material comprises a polybutadiene rubber.

5. The golf ball of claim 1 wherein said thermoset material comprises a polyurethane.

6. The golf ball of claim 1 wherein said thermoplastic material comprises a material selected from

the group consisting of (i) polyurethane, (ii) polyester, (iii) polyamide, (iv) ionomer, (v) polycarbonate, (vi) 5 polyether block amide, and (vii) combinations thereof.

7. The golf ball of claim 1 wherein said center component of said dual core has an outer diameter of from about 0.500 inches to about 1.250 inches, and said dual core has an outer diameter of from about 1.25 to about 5 1.600 inches.

8. The golf ball of claim 1 wherein at least one of said core layer and said center component of said dual core comprise a density increasing agent.

9. The golf ball of claim 1 wherein at least one of said core layer and said center component of said dual core comprise an agent that is foamed or otherwise reduced in density.

*Sub A2* 10. A multi-layer golf ball comprising:  
a dual core having a center component and a core layer disposed about said center component; and at least one cover layer disposed about said dual core;

5 wherein said center component comprises a thermoset material and said core layer comprises a thermoplastic material;

wherein said cover layer includes at least a single outer cover layer having a Shore D hardness of 10 from about 40 to 50.

11. The golf ball of claim 10 wherein said thermoset material comprises a material selected from the group consisting of (i) a diene-containing polymer, (ii) a metallocene catalyzed polyolefin that is crosslinked, (iii) a polyurethane, (iv) a silicone, (v) a polyamide, 5 (vi) a polyurea, and (vii) combinations thereof; and said thermoplastic material comprises a material selected from

the group consisting of (i) an ionomer, (ii) a polyurethane, (iii) an elastomer, (iv) a polyetheramide, (v) a polyetherester, (vi) a metallocene catalyzed polyolefin, (vii) a styrene butadiene block copolymer, and (viii) combinations thereof.

12. The golf ball of claim 10 wherein said core layer comprises more than one layer.

13. The golf ball of claim 10 wherein said thermoset material comprises a polybutadiene rubber.

14. The golf ball of claim 10 wherein said thermoset material comprises a polyurethane.

15. The golf ball of claim 10 wherein said thermoplastic material comprises a material selected from the group consisting of (i) polyurethane, (ii) polyester, (iii) polyamide, (iv) ionomer, (v) polycarbonate, (vi) 5 polyether block amide, and (vii) combinations thereof.

16. The golf ball of claim 10 wherein said center component of said dual core has an outer diameter of from about 0.500 inches to about 1.250 inches, and said dual core has an outer diameter of from about 1.25 to about 5 1.600 inches.

17. The golf ball of claim 10 wherein at least one of said core layer and said center component of said dual core comprise a density increasing agent.

18. The golf ball of claim 10 wherein at least one of said core layer and said center component of said dual core comprise an agent that is foamed or otherwise reduced in density.